

## REMARKS

Claims 1, 2, 4-12, 14-21, 23-29 and 31-36 are pending, whereas claims 3, 13, 22 and 30 were previously cancelled by applicants without prejudice.

Applicants thank the Examiner for entering applicants' Response and Amendment of 10 December 2002, and for withdrawing, in view thereof, the prior 35 U.S.C. § 112 ¶1, 2 rejections (claim 1-36) and the 35 U.S.C. § 103(a) rejection (claims 20-21, 23-29 and 31-35) (*see* paper #34; Office Action of 30 June 2003, at page 5, paras 2 and 3).

Applicants acknowledge that the Examiner has rejected (new ground) claims 1, 2, 4-12, 14-21, 23-29 and 31-36 as being unpatentable because of obviousness-type double patenting in view of U.S. Patent No. 6,239,298 (*Id.* at page 4). Applicants respectfully traverse this rejection, based on the surprising results of the instant claimed products as taught and claimed in applicants' originally filed application.

Applicants thank the Examiner for indicating that claims 20-21, 23-29 and 31-35 would be allowed upon filing of a proper Terminal Disclaimer, in view of the non-statutory double patenting rejection. However, this should not be necessary in view of applicants' arguments herein.

Applicants acknowledge that the Examiner maintains the rejection of claims 1, 2, 4-9, 11, 12, 14-19, and 36 as being unpatentable, under 35 U.S.C. § 103(a), over *Kaza* (U.S. Patent No. 4,574,057), in view of *Urushibata* et al (U.S. Patent No. 5,304,316) and *Lindemann* (U.S. Patent No. 3,322,703).

Applicants respectfully traverse the Examiner's maintained 35 U.S.C. § 103(a) rejection in view of the differences between the asserted art and the instant claimed processes and compounds, but have made a clarifying amendment to independent claim 1.

No new matter has been added.

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***Rejection under 35 U.S.C. § 112 ¶2***

The Examiner rejected claims 4, 10, 12, 14, 23 and 36, under 35 U.S.C. § 112 ¶2, “as being indefinite...” (see paper #34; Office Action of 30 June 2003, at pages 2-3).

Specifically, claims 4, 14 and 23 depend on cancelled claim 3, 13 and 22, respectively. Additionally, the preambles of dependent claims 12 and 14 do not conform to the preamble of the respective independent claim 11. Finally, the Examiner asserts that claim 36 appears to be a duplicate of claim 10, because it provides no additional limitations.

In response, applicants have amended claims 4, 14 and 23 to depend from claims 1, 11 and 20, respectively. Additionally, applicants have amended the preambles of dependent claims 12 and 14 to recite “process for synthesizing an anti-wear compound of claim 11,” and thus to conform to that of independent claim 11. Finally, applicants have amended claim 36 to depend from claim 10 and recite only one combination of first, second and third moieties; namely “trimethylol propane trioleate-sorbic acid-sorbitol.”

Applicants have also non-substantively amended the claims to correct the spelling of “trimethylol.” Support for this correction is found in the art, and also in the instant Specification at, *inter alia*, page 11, line 36, and in various other originally-filed claims.

Applicants, therefore, respectfully request withdrawal of the Examiner’s § 112 ¶2 rejection of currently amended claims 4, 10, 12, 14, 23, and 36 in view of applicant’s responsive amendments.

***Rejection under 35 U.S.C. § 103(a)***

The Examiner has maintained the rejection of claims 1, 2, 4-9, 11, 12, 14-19, and 36 as being unpatentable, under 35 U.S.C. § 103(a), over ***Kaza*** (U.S. Patent No. 4,574,057), in view of ***Urushibata*** et al (U.S. Patent No. 5,304,316) and ***Lindemann*** (U.S. Patent No. 3,322,703). (see paper #34; Office Action of 30 June 2003, at pages 3, last spanning para to page 4).

Essentially, the Examiner asserts that *Kaza*: teaches “(a) and/or (b)” as equivalents to applicants’ *first moiety*; teaches (c) as equivalent to applicants’ *second moiety*; and teaches (e) as

equivalent to applicants' *third moiety*, and that applicants' processes (and therefore products) are indistinguishable from the asserted prior art (*Id*) (*see also* paper # 21; Office Action of 25 April 2002, at pages 4-5, as reiterated by the Examiner).

Applicants respectfully, but *adamantly* traverse this rejection, based on the fact that the Examiner has inadvertently misconstrued the teachings of *Kaza* in two significant ways.

**First**, as has been argued in the record in detail (and will thus not be repeated at length again here) the instant inventive processes involve a first reaction between a first moiety and the second moiety in a "Diels-Alder" cycloaddition reaction.

*Kaza*, alone or in combination with *Urushibata* and *Lindemann*, does not teach or disclose a Diels-Alder reaction, and even if it did (which it does not), it does not teach or suggest such a Diels-Alder reaction as a *first* step, and it does not, as described herein below, teach such a reaction in the absence of Dicyclopentadiene (DCPD), or the use of such a reaction in a two step process lacking DCPD.

*Kaza*, alone or in combination with *Urushibata* and/or *Lindemann* does not describe, teach or suggest applicants' process or the products thereof.

**Second**, *Kaza* discloses a process for producing a base resin. The base resin has the composition: (a) plus (b) plus (c) plus (e). Additionally, *Kaza* teaches that the base resin can be reacted with Component (d) to produce a modified base resin, wherein (d) is either reacted simultaneously with (a) plus (b) plus (c) plus (e), or is alternatively added after (a) plus (b) plus (c) plus (e) have been allowed to react (*see Kaza, inter alia*, at column 2, lines 18-24). Additionally, Component (a) is explicitly defined as dicyclopentadiene (DCPD; *see* chemical structure attached hereto as **APPENDIX A**).

Significantly, and contrary to the Examiner's assertions, *Kaza* does **not** teach "(a) and/or (b)" in the process for making the base resin or modified base resin. Rather *Kaza* teaches a **requirement** (limitation) that Component (a) (DCPD) is in a "predominant amount" in making the base resin and the modified base resin, regardless of how the reactants are put together. In fact,

Examination of *every* Table of Kaza (Table I-IV) shows that DCPD-rich hydrocarbon fraction was used at a level of from about 64% to about 76% in all the Examples.

Therefore, the *inescapable* teaching of *Kaza* is that the structures of the reaction products (the base resin and modified base resin) are dominated by the incorporation of the predominant reactant DCPD.

By contrast, the present invention is not limited to the use of DCPD, and DCPD is not present as a predominant reagent in the instant inventive processes. Applicants, therefore, have met the burden placed by the Examiner in distinguishing the inventive products from the art.

Applicants have, nonetheless, amended claim 1 to clarify applicants' invention as originally conceived. Specifically, claim 1 has been amended to recite "from about 220°C to about 320°C," in place of "from about 22°C to about 320°C," reflecting the Diels-Alder conditions as originally claimed in applicants' originally filed Specification. The 22°C temperature recited in claim 1 was *inadvertently* introduced into the claim in applicants' Amendment of 5 September 2001, and should have been 220°C as originally taught and claimed (*see* originally filed claim 1; *and see* Specification at, e.g., page 2, line 26, page 3, line 25, page 4, line 3 and page 5, line 26).

Applicants, therefore, respectfully request withdrawal of the Examiner's rejection of under 35 U.S.C. § 103(a) and allowance of presently amended claims 1, 2, 4-9, 11, 12, 14-19, and 36 in view of *Kaza*, alone or in combination with *Urushibata* or *Lindemann*.

### ***Nonstatutory Double Patenting Rejection***

The Examiner has rejected (new ground) claims 1, 2, 4-12, 14-21, 23-29 and 31-36 as being unpatentable because of alleged obviousness-type double patenting in view of co-owned U.S. Patent No. 6,239,298 (*see* paper #34; Office Action of 30 June 2003, at page 4).

Applicants respectfully traverse this rejection, based on the fact that the first moieties are distinguishable between the present application and the asserted patent.

While an asserted reference for double patenting purposes need not be assertable as 102 or 103 prior art, the obviousness-type double patenting analysis is analogous to that for considering obviousness under Section 103.

Specifically, the '298 patent relates to "fuel lubricity additives," and recites the use of an "unsaturated triglyceride plant oil or a thermal polymer thereof," whereas the instant application claims an "unsaturated synthetic base oil." *Surprisingly*, as taught in Examples 2 and 3 of the originally filed application, TMOSS (made from an unsaturated synthetic base oil) is as effective at preventing wear as the additive made by the same process from soybean oil, **but** is much more stable in high temperature, oxidizing conditions, as would be found in an engine crankcase (*see* Specification at page 13, lines 33-35).

Therefore, the present claimed invention is not obvious in view of applicants' '298 patent, and applicants respectfully request withdrawal of the Examiner's non-statutory double patenting rejection.

### CONCLUSION

In view of the foregoing amendments and remarks, applicants respectfully request entry of the present Response and Amendment, and allowance of all claims 1, (Currently amended), 2 (Previously amended), 4 (Currently amended), 5-9 (all Original), 10 (Currently amended), 11 (Original), 12 (Currently amended), 14 (Currently amended), 15-20 (all Original), 21 (Previously amended), 23 (Currently amended), 24-25 (both Original), 26 (Previously amended), 27-28 (both Original), 29 (Previously added), 31 (Currently amended), 32-35 (all Original), and 36 (Currently amended).

The Examiner is encouraged to phone applicants' attorney, Barry L. Davison, to resolve any outstanding issues and expedite allowance of this application.

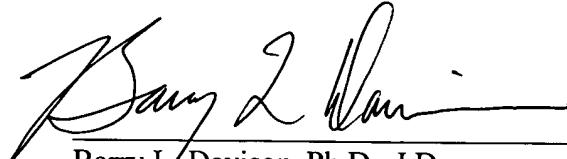
No new matter has been added.

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Respectfully submitted,

Davis Wright Tremaine LLP

A handwritten signature in black ink, appearing to read "Barry L. Davison", written over a horizontal line.

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